UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: JAN 18 2001

Subject: Review of Region 5 Data for Sheffield Steel

From: John V. Morris , Chemist
Region 5 Central Regional Laboratory

To: Patrick Kuefler
DRE-8J

Attached are the results for Site: Sheffield Steel
CRL Data Set Number: 20000061
for analyses of : Chromium in TCLP Extracts
Results are reported for sample numbers: 2000RC05S01, 2000RC05D01, 2000RC05S02, 2000RC05S03 and 2000RC05S06

Results Status:
(x) Acceptable for Use
( ) Data Qualified, but Acceptable for use
( ) Data Unacceptable for Use

Sylvia Griffin JAN 18 2001

CRL Data Management Coordinator and Date Received

Date Transmitted: JAN 18 2001

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML - 10C

Received by and Date

Comments:

Date: 29 December 2000
Analyst: John V. Morris
Sample Batch Number: 20000061
Facility Name: Sheffield Steel
Analyte: Chromium in TCLP Extracts

Narrative for the Analysis of Chromium in TCLP Extracts of Solids in Batch 20000061

On 24 August 2000, 9 solid samples were received from RCRA for analysis of the 8 RCRA metals. On the basis of that analysis, 5 of these samples were selected for TCLP analysis for chromium. The attached e-mail from Patrick Kuefler documents the limitation of the request to these 5 samples, and to Cr only. The 5 samples are: 2000RC05S01, Station S01; 2000RC05D01, Station D01; 2000RC05S02, Station S02; 2000RC05S03, Station S03; and 2000RC05S06, Station S06. All were a dark, nearly black, with no free liquid, and the consistency of soil. The samples were collected 23 August 2000.

The performance of method 1311 (CRL SOP GC006) began 6 November 2000, and concluded 7 November 2000. Extraction fluid 1 was used for all samples. As the samples contained no free liquid, they were treated as 100% solids. During the pH determination, it was noted that there were particles like iron filings in the samples that adhered to the stirring bars. J.V. Morris performed the extraction.

On 14 November 2000, the extracts and blanks were digested at 5 mL to 50 mL dilution using Method 200.2 on the Hot Block (CRL Method Metals025). Since only chromium was of interest, a special spike was used that would yield $^1/_{10}$ of the action level in the regulation (40 CFR part 261.24, Table 1), before correction for the 10-fold dilution. The spike was 500 µg Cr/L in the digest. The digestion log number was 1239.

On 15 November 2000, after bringing the digests to volume, the digests were analyzed by ICP using CRL SOP METALS003. During this run, all chromium audits were in control. No Cr was detected in the digests above reporting limit. One sample from a previous run was reanalyzed during this run, but that data has been described in the appropriate narrative.

All analytical results files, sample information files and reformat files for chromium by ICP can be found on the R5CRL data server using the following path:
h:\r5crl\vol3\metals\jvmorris\20000061\3300dv\

The narrative, QC summary spreadsheets, sample result calculation spreadsheets and the final sample report for chromium by ICP can be found on the R5CRL data server using the following path:
h:\r5crl\vol3\metals\jvmorris\20000061\reports\

US EPA CRL - Region V
ICP Final Report Results
TCLP Extracts

Sample Batch Number: 20000061 Study: Sheffield Steel
Analysis Date: 15 Nov 00

Sample ID	Station ID	Analyte	Concentration		Units
2000RC05S01	S01	Cr	0.03	U,D	mg/L
2000RC05D01	D01	Cr	0.03	U,D	mg/L
2000RC05S02	S02	Cr	0.03	U,D	mg/L
2000RC05S03	S03	Cr	0.03	U,D	mg/L
2000RC05S06	S06	Cr	0.03	U,D	mg/L

Jcm
29 Dec 00

2000261

ENVIRONMENTAL PROTECTION AGENCY 901020
FOR THE TEAM METALS

DIVISION/BRANCH RCRA SAMPLING DATE 8/23/00 LAB ARRIVAL DATE 8/24/00 DUE DATE 10/9/00

DO NUMBER 901020 DATASET NUMBER 2000261 STUDY SHEFFIELD STEEL PRIORITY _____ CONTRACTOR TECHLAW

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S TOTAL ICAP MG/KG (DRY WT.) MF1A1	SEDIMENTS SOLID S AS MG/KG (DRY WT.) ME1A63	SEDIMENTS SOLID S Hg MG/KG (DRY WT.) ME1A203	SEDIMENTS SOLID S SE MG/KG (DRY WT.) ME1A213	SEDIMENTS SOLID S TL MG/KG (DRY WT.) ME1A223
2000RCRA						
014 — S01	5-063995/063999	X TCLP	X	X	X	X
033 — D01	5-063462	X TCLP	X	X	X	X
015 — S02	5-063448	X TCLP	X	X	X	X
043 — S03	5-063450	X TCLP	X	X	X	X
034 — S04	5-063453	X	X	X	X	X
021 — S05	5-063455	X	X	X	X	X
037 — S06	5-063457	X TCLP	X	X	X	X
024 — S07	5-063459	X	X	X	X	X
022 — S08	5-063461	X	X	X	X	X
23 — S01						

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required ***D***ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations ***E***xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. The reported value is considered to be estimated
J	This flag is used when the analyte is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (*J* is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL ***M***ethod Detection Limit (MDL) but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is estimated due to its presence in this concentration range.
N	This flag applies to GC/MS Te***N***tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

4/11/00

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: NOV 0 2 2000

Subject: Review of Region 5 Data for Sheffield Steel

From: Nidia Fuentes , Chemist NF
Region 5 Central Regional Laboratory

To: Patrick Kuefler
DRE-8J

Attached are the results for Site: Sheffield Steel
CRL Data Set Number: 2000 0061
for analyses of : VOA - TCLP
Results are reported for sample numbers: 2000RC05S06

Results Status:
( ) Acceptable for Use
( ) Data Qualified, but Acceptable for use
(X) Data Unacceptable for Use since the sample was extracted outside the sample extraction holding time, the sample had head-space and TCE was not detected at all in the filed sample. Therefore no data can be reported for -S06 as per the CRL SOP.

Sylvia Griffin NOV 0 2 2000

CRL Data Management Coordinator and Date Received

Date Transmitted: NOV 0 2 2000

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML - 10C

Received by and Date

Comments:

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required ***D***ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations ***E***xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. The reported value is considered to be estimated
J	This flag is used when the analyte is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (***J*** is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL ***M***ethod Detection Limit (MDL) but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is estimated due to its presence in this concentration range.
N	This flag applies to GC/MS Te***N***tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

4/11/00

2000 161 ADDITIONAL REQUEST 10/20/2000

ENVIRONMENTAL PROTECTION AGENCY — 901020 DISTRIBUTED 11/1/2000 W.A.
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH RCRA SAMPLING DATE 8/23/00 LAB ARRIVAL DATE 8/24/2000 DUE DATE 11/20/00

DU NUMBER 901020 DATASET NUMBER 2000161 STUDY SHEFFIELD STEEL PRIORITY N CONTRACTOR TECHLAW

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ABN ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TCLP TOX215622	SEDIMENTS SOLIDS AHA ORGANICS SCAN MG/KG (DRY) TOX215722
2000RC05					
SO6	SO2-SO6			K	

CRL V.2; 3/85

CASE NARRATIVE

DATE: October 27, 2000

PROJECT NAME: Sheffield Steel- CRL Case #:20000061
Analysis of Volatile Organic Analytes (TCLP-VOA)

ANALYST: Nidia Fuentes, Chemist NF

REVIEWER: Babu Paruchuri, GC/MS Group Leader BP

I. CASE DESCRIPTION:

On 10/20/00 the laboratory was requested to do ZHE analysis on 2000RC05S06 for trichloroethene (TCE). Initially all site samples were received at the lab in 'encore devices' and analyzed on 08/31/00 for VOA. The current ZHE analysis request is outside the sample analysis holding time. Also, the sample used for the ZHE extraction was already opened to perform ABN/PCB-Pest analysis. It is critical that samples requiring VOA analysis should have no headspace prior to the ZHE extraction. Because TCE was not detected in 2000RC05S06, TCE data were flagged unacceptable for use (R) and therefore no data could be reported. (QC Criteria for soil sample analysis holding time: 14 days from the date of collection.)

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** On each day of analysis, the GC/MS instrument (HP-MSD#4) performance checks were made to determine whether the instrument met the EPA tuning criteria for p-BFB (QC Criteria: Same as the CWA's criteria). No problems were observed.

2. **Initial Calibration Check:** An acceptable five point initial calibration (IC) curve (QC Criteria for IC: %RSD should be $\leq$ 35%) is required for all target compounds before samples can be analyzed. The lab generated one IC curve on 10/24/00, having one outlier, naphthalene. The parameter of interest is trichloroethene (TCE).

3. **Continuing Calibration Check:** One continuing calibration check (CCC) standard was evaluated to analyze the site samples. The CCC data generated on 10/26/2000 met the CRL QC requirements for trichloroethene (TCE) (QC Criteria for CC: %D should be $\leq$ 30%.)

4. **Internal Standard (IS) Area and Retention Time (RT) Summary:** Sample 2000RC05S06 met the CRL QC requirements.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** On each day of sample analysis, 5-ml of reagent water was spiked with internal standards and surrogates and was analyzed to check the GC/MS and purge and trap systems. On TCLP blank, consisted of fluid #1, was also analyzed. Blank sample data were acceptable.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the CRL's QC limits for all samples except for p-bromofluorobenzene reporting 76% recovery in sample 2000RC05S06 (QC limits for recovery: 79% - 109%). No data are qualified when only one surrogate is outside the QC requirement limits, as per the CRL SOP.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** Not applicable.

4. **Laboratory Control Sample (LCS):** Not applicable.

5. **Performance Evaluation Sample (PES):** Not applicable. QC Criteria for the PES: Control Limits are established by EMSL-LV.

IV. SAMPLE RESULTS:

The laboratory's data were unacceptable for use since the ZHE analysis request was made outside the sample extraction holding time and also none of the target compounds was detected in 2000RC05S06.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Lab Name: SHEFFIELD Contract: CRL

Lab Code: 5-CRL Case No.: 20000061 SAS No.: SDG No.: GCMS023

Matrix: (soil/water) WATER Lab Sample ID: LAB BLANK

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 7C102604.D

Level: (low/med) LOW Date Received: 08/20/00

% Moisture: not dec. Date Analyzed: 10/26/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	25	U
75-01-4	Vinyl chloride	10	U
127-18-4	Tetrachloroethene	5	U
75-35-4	1,1-Dichloroethene	5	U
79-01-6	Trichloroethene	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
108-90-7	Chlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LAB BLANK

Lab Name: SHEFFIELD Contract: CRL

Lab Code: 5-CRL Case No.: 20000061 SAS No.: _____ SDG No.: GCMS023

Matrix: (soil/water) WATER Lab Sample ID: LAB BLANK

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 7C102604.D

Level: (low/med) LOW Date Received: 08/20/00

% Moisture: not dec. _____ Date Analyzed: 10/26/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TCLP BLANK

Lab Name: SHEFFIELD Contract: CRL

Lab Code: 5-CRL Case No.: 20000061 SAS No.: _____ SDG No.: GCMS023

Matrix: (soil/water) WATER Lab Sample ID: TCLP BLANK

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 7C102605.D

Level: (low/med) LOW Date Received: 08/20/00

% Moisture: not dec. _____ Date Analyzed: 10/26/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	25	U
75-01-4	Vinyl chloride	10	U
127-18-4	Tetrachloroethene	5	U
75-35-4	1,1-Dichloroethene	5	U
79-01-6	Trichloroethene	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
108-90-7	Chlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TCLP BLANK

Lab Name: SHEFFIELD Contract: CRL

Lab Code: 5-CRL Case No.: 20000061 SAS No.: _____ SDG No.: GCMS023

Matrix: (soil/water) WATER Lab Sample ID: TCLP BLANK

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 7C102605.D

Level: (low/med) LOW Date Received: 08/20/00

% Moisture: not dec. _____ Date Analyzed: 10/26/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S06

Lab Name: SHEFFIELD Contract: CRL

Lab Code: 5-CRL Case No.: 20000061 SAS No.: SDG No.: GCMS023

Matrix: (soil/water) WATER Lab Sample ID: 2000RC05S06

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 7C102606.D

Level: (low/med) LOW Date Received: 08/20/00

% Moisture: not dec. Date Analyzed: 10/26/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L		Q
67-66-3	Chloroform	0	U	R
107-06-2	1,2-Dichloroethane	0	U	R
78-93-3	2-Butanone	0	U	R
75-01-4	Vinyl chloride	0	U	R
127-18-4	Tetrachloroethene	0	U	R
75-35-4	1,1-Dichloroethene	0	U	R
79-01-6	Trichloroethene	0	U	R
56-23-5	Carbon tetrachloride	0	U	R
71-43-2	Benzene	0	U	R
108-90-7	Chlorobenzene	0	U	R
106-46-7	1,4-Dichlorobenzene	0	U	R

mf 10/30/00

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2000RC05S06

Lab Name: SHEFFIELD Contract: CRL

Lab Code: 5-CRL Case No.: 20000061 SAS No.: _____ SDG No.: GCMS023

Matrix: (soil/water) WATER Lab Sample ID: 2000RC05S06

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: 7C102606.D

Level: (low/med) LOW Date Received: 08/20/00

% Moisture: not dec. _____ Date Analyzed: 10/26/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: NOV 0 2 2000

Subject: Review of Region 5 Data for Sheffield Steel

From: Kathleen Swan, Chemist
Region 5 Central Regional Laboratory

To: Patrick Kuefler
DRE - 8J

Attached are the results for Site: Sheffield Steel
CRL Data Set Number: 20000061
for analyses of : ICP RCRA Metals
Results are reported for sample numbers: 2000RC05S01-S08, D01

Results Status:
(X) Acceptable for Use
( ) Data Qualified, but Acceptable for use
( ) Data Unacceptable for Use

Sylvia Griffin NOV 0 2 2000

CRL Data Management Coordinator and Date Received

Date Transmitted: NOV 0 2 2000

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML - 10C

Received by and Date

Comments:

Narrative Date: 10 26 2000
Analyst: K. Swan
Batch Number: 20000061
Study: Sheffield Steel
Parameter: ICP RCRA Metals

ICP NARRATIVE for Data Set 20000061

Nine samples (2000RC05S01-S08, D01) were submitted for the analysis of ICP RCRA metals. The samples were collected on 08 23 00 and received by the CRL on 08 24 00.

Solids were dried overnight and ground. The sample and digestion QC were digested for ICP metals on 10 16 00, following the 200.2 hot block standard digestion protocols for soil samples. All samples were digested within the six month hold time for metals. Sample analysis was performed on 10 18 00.

All analytical results files, sample information files and reformat files for ICP can be found on the R5CRL data server using the following paths: h:\r5crl\vol3\metals\Kswan\20000061\3300dv

The narrative, QC summary spreadsheets, sample result calculation spreadsheets and the final sample report for ICP can be found on the R5CRL data server using the following path:
h:\r5crl\vol3\metals\Kswan\20000061\Reports1018

Results file 20000061 1226 101800+Zn M

Blanks were within reporting limit. Instrument and digestion QC are within range. Samples were run diluted due to high metal content. Samples were reprepared due to high levels of metals of interest and a higher-level spike solution was used.

Narrative by: Kathleen Swan Chemist, USEPA
Date: 11 02 00

Sed - 202 ICP + As

2000761

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAMS METALS

901020

DIVISION/BRANCH RCRA SAMPLING DATE 8/23/00 LAB ARRIVAL DATE 8/24/00 DUE DATE 10/9/00

DU NUMBER 901020 DATASET NUMBER 2000761 STUDY SHOFFIELD STEEL PRIORITY _____ CONTRACTOR TECHLAW

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLIDS AS MG/KG (DRY WT.) MET463	SEDIMENTS SOLIDS Hg MG/KG (DRY WT.) MET4283	SEDIMENTS SOLIDS SE MG/KG (DRY WT.) MET4213	SEDIMENTS SOLIDS TL MG/KG (DRY WT.) MET4223
2000RCRS						
014 — S01	5-063995/063999	X	X	X	X	X
033 — D01	5-063462	X	X	X	X	X
015 — S02	5-063448	X	X	X	X	X
043 — S03	5-063450	X	X	X	X	X
034 — S04	5-063453	X	X	X	X	X
021 — S05	5-063455	X	X	X	X	X
037 — S06	5-063457	X	X	X	X	X
024 — S07	5-063459	X	X	X	X	X
022 — S08	5-063461	X	X	X	X	X
23 — S01						

C .2: 3/85

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05D01	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	5	U, D	mg/kg
Barium	8.8	D	mg/kg
Cadmium	5	U, D	mg/kg
Chromium	530	D	mg/kg
Lead	80	U, D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S01	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	5	U, D	mg/kg
Barium	8.5	D	mg/kg
Cadmium	5	U, D	mg/kg
Chromium	560	D	mg/kg
Lead	85	U, D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S02	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	9.5	D	mg/kg
Cadmium	2.5	U, D	mg/kg
Chromium	340	D	mg/kg
Lead	61	D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S03	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	7.8	D	mg/kg
Cadmium	2.5	U, D	mg/kg
Chromium	380	D	mg/kg
Lead	44	D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S04	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	190	D	mg/kg
Cadmium	4.3	D	mg/kg
Chromium	88	D	mg/kg
Lead	330	D	mg/kg

tks
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S05	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	74	D	mg/kg
Cadmium	2.5	U, D	mg/kg
Chromium	81	D	mg/kg
Lead	800	D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S06	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	68	D	mg/kg
Cadmium	20	D	mg/kg
Chromium	230	D	mg/kg
Lead	220	D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S07	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	130	D	mg/kg
Cadmium	3.7	D	mg/kg
Chromium	13	D	mg/kg
Lead	150	D	mg/kg

KRS
11 01 00

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S08	Station ID:	
Sample Batch Number:	20000061	Study:	Sheffield Steel
Analysis Date:	10 18 00		

Element	Amount		Units
Silver	2.5	U, D	mg/kg
Barium	340	D	mg/kg
Cadmium	4.7	D	mg/kg
Chromium	16	D	mg/kg
Lead	280	D	mg/kg

KRS
11 01 00

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data.
D	This flag is used when the analyte concentration results from a required ***D***ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations ***E***xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. .The reported value is considered to be estimated
J	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL reporting limit (RL) but the quantitated value is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. (***J*** is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL ***M***ethod Detection Limit (MDL) but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is estimated due to its presence in this concentration range.
N	This flag applies to GC/MS Te***N***tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: OCT 25 2000

Subject: Review of Region 5 Data for Sheffield Steel

From: Roger Rudinsky , Chemist
Region 5 Central Regional Laboratory

To: Patrick Kuefler
DRE-8J

Attached are the results for Site: Sheffield Steel
CRL Data Set Number: 20000061
for analyses of : PAHs
Results are reported for sample numbers: (List of sample numbers) 2000RC05S01- 2000RC05S07 2000RC05S01MS 2000RC05S01MSD and 2000RC05D01.

Results Status:
(X) Acceptable for Use

(X) Data Qualified, but Acceptable for use - For the compound data qualified UJ or J, please see the attached case narrative.

( ) Data Unacceptable for Use

Sylvia Griffin OCT 25 2000

CRL Data Management Coordinator and Date Received

Date Transmitted: OCT 25 2000

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML - 10C

Received by and Date

Comments:

20000061

90102D

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAMS TOXIC SUBSTANCES

DIVISION/BRANCH RCRA SAMPLING DATE 8/23/00 LAB ARRIVAL DATE 8/24/00 DUE DATE 10/9/2000

DU NUMBER 90102D DATASET NUMBER 20000061 STUDY SHEFFIELD STEEL PRIORITY _____ CONTRACTOR TECHLAW

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ABN ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX215622	SEDIMENTS SOLIDS AHA ORGANICS SCAN MG/KG (DRY) TOX215722
2000RC05					
S01	5-063447/5063477				⊗
D01	5-063465				⊗
S02	5-063449				X
S03	5-063452				X
S04	5-063454				X
S05	5-063456				X
S06	5-063458				X
S07	5-063460				X
S01	5-063466			X	
S02	5-063467			X	
S03	5-063468			X	
S04	5-063469			X	
S05	5-063470			X	
S06	5-063471			X	
S07	5-063472			X	
D02	5-063463			N	

⊗ GPC processed on 1/30/01 later - Roger

CRL V.2: 3/85

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required ***D***ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations ***E***xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. The reported value is considered to be estimated
J	This flag is used when the analyte is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (***J*** is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL ***M***ethod Detection Limit (MDL) but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is estimated due to its presence in this concentration range.
N	This flag applies to GC/MS Te***N***tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

4/11/00

CASE NARRATIVE

DATE: October 11, 2000

PROJECT NAME: Sheffield Steel - CRL Case #: 20000061
Analysis of Polynuclear Aromatic Hydrocarbons
Organic Analytes (PAH)

ANALYST: Roger Rudinsky, Chemist

REVIEWERS: Babu Paruchuri, Chemist

I. CASE DESCRIPTION:

The laboratory received 10 soil samples from the subject site for PAH analysis. The samples were collected on 8/23/00. The soil samples were Soxhlet extracted and analyzed by GC/MS technique. All these tasks were completed within the sample holding time requirements. The QC criterion for sample holding times for soil extraction is 14 days from day of collection and for analysis 40 days from the day of extraction. These samples were received at the laboratory in good condition.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** The samples were analyzed on September 19th . IPCs using DFTPP were made on GC/MS to determine if EPA tuning criteria were met. The QC criteria are the same as those found in the Clean Water Act(CWA - NPDES SOP).All ions were within specifications.

2. **Initial Calibration Check:** An acceptable five point initial calibration (IC) curve (QC Criteria for IC: %RSD should be $\leq$ 30%) is required for all target compounds before samples can be analyzed.
The initial calibration data collected on September 19th was acceptable for all of the compounds.

3. **Continuing Calibration Check:** An acceptable continuing calibration (CC - QC Criteria for CC: %D should be < 25%) is required for all target compounds before samples can be analyzed.
The continuing calibration data file (1C091902) was acceptable for all of the compounds.
The continuing calibration data file (1C091917) was acceptable for all of the compounds.

4. **Internal Standard (IS) Area and Retention Time Summary:**
Some samples did not meet the internal standard (IS) area QC requirements. (QC Criteria for IS Area: internal standard areas of the samples should be - 50% to + 200% of the corresponding IS areas of the daily calibration standard).

These samples were 2000RC05D01, -S01, -S01MS, -S01MSD, -S05, -S06 and -S07 had IS6 area counts outside the acceptance range. Samples 2000RC05S02 and -S03 had both IS5 and IS6 area counts outside their acceptance ranges.

All samples met the internal standard (IS) RT QC requirements. (QC Criteria for RT: RT of the IS compounds in the samples should be within 30 seconds of the daily calibration standard IS compounds).

III. METHOD QUALITY CONTROL:

1.**Method Blank Results:** On the day of extraction,a Lab Blank (reagents spiked with surrogates) was extracted and analyzed to check the extraction apparatus and GC/MS systems for laboratory contamination (see Form I ABN). If TCLs were detected in the Method Blank samples, data for the affected batch of samples were qualified B(B = found in Method Blank) if the same TCLs were also detected in the site samples. No target compounds or TICS were found in the blank.

2.**Surrogate Spike Compound Results:** Some surrogate spike compound recovery data were outside the QC limits.These included:

For the soil samples analyzed on September 19th there were a few outliers: 2000RC05S01MS, -S01MSD and -S03 had S1 with a recovery outside acceptance limits.

No corrective action is taken unless two or more of the surrogates are outside acceptance ranges. In addition two or more of the outliers must be from the same fraction acid or base/neutral for any data qualification to occur. When this happens all detects are flagged with a `J' and all non-detects with a `UJ'. The acid surrogates are S1,S2 and S5. In the case where one surrogate is high and one is low and both are from the same fraction only detected compounds are given the "J" flag.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:**

2000RC05S01 was used for MS/MSDs for the soil samples.

No data was qualified based on the MS/MSD data.

4. **Laboratory Control Sample (LCS):** On the day of extraction Laboratory Control Samples (LCS and LCS Duplicate) were extracted and analyzed with the site samples.

In keeping with the new QC plan this pair of samples was not used for any data qualification since the MS/MSD appears to be a good indicator of target compound recovery precision.

5. **Performance Evaluation Sample (PES):** Not applicable.

IV. SAMPLE RESULTS:

We have discovered that the GC/MS column we are using is not capable of separating 3-methylphenol and 4-methylphenol. We have ordered a new column that will be capable of this for future analysis.

We have noticed that the concentration of one of our surrogates Phenol-D5 in our standard mixes obtained from Supelco is greater now than in previous batches. We will contact the vendor to explain this.

Most of the samples had a large peak that extended from approximately 15 minutes to the end of each run. It appeared to be a mixture of both aliphatic and aromatic hydrocarbons. It was impossible to identify each of them so we integrated the entire peak and reported it as a TIC. We labeled this peak as unknown hydrocarbon.

In almost all cases manual integration was performed for the following reasons:

(1) The manual integration was performed because the entire compound peak area was not integrated by the software. The spectra of both before and after may or may not be identical depending on co-eluting peaks.
(2) The software selected the wrong peak for integration.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB 8/28

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: _____ SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: MB 8/28

Sample wt/vol: 30.08 (g/ml) G Lab File ID: 1C091909.D

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/19/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	660	U
91-57-6	2-Methylnaphthalene	660	U
208-96-8	Acenaphthylene	660	U
83-32-9	Acenaphthene	660	U
86-73-7	Fluorene	660	U
85-01-8	Phenanthrene	660	U
120-12-7	Anthracene	660	U
206-44-0	Fluoranthene	660	U
129-00-0	Pyrene	660	U
56-55-3	Benzo[a]anthracene	660	U
218-01-9	Chrysene	660	U
205-99-2	Benzo[b]fluoranthene	660	U
207-08-9	Benzo[k]fluoranthene	660	U
50-32-8	Benzo[a]pyrene	660	U
193-39-5	Indeno[1,2,3-cd]pyrene	660	U
53-70-3	Dibenz[a,h]anthracene	660	U
191-24-2	Benzo[g,h,i]perylene	660	U

NO TICS DETECTED
9/25/00 RR

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

MB 8/28

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: _____ SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: MB 8/28

Sample wt/vol: 30.08 (g/ml) G Lab File ID: 1C091909.D

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/19/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S01

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S01

Sample wt/vol: 30.0334 (g/ml) G Lab File ID: 1C091919.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 2.5514 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3400	U
91-57-6	2-Methylnaphthalene	3400	U
208-96-8	Acenaphthylene	3400	U
83-32-9	Acenaphthene	3400	U
86-73-7	Fluorene	3400	U
85-01-8	Phenanthrene	3400	U
120-12-7	Anthracene	3400	U
206-44-0	Fluoranthene	3400	U
129-00-0	Pyrene	3400	U
56-55-3	Benzo[a]anthracene	3400	U
218-01-9	Chrysene	3400	U
205-99-2	Benzo[b]fluoranthene	3400	U J
207-08-9	Benzo[k]fluoranthene	3400	U J
50-32-8	Benzo[a]pyrene	3400	U J
193-39-5	Indeno[1,2,3-cd]pyrene	3400	U J
53-70-3	Dibenz[a,h]anthracene	3400	U J
191-24-2	Benzo[g,h,i]perylene	3400	U J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05S01

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S01

Sample wt/vol: 30.0334 (g/ml) G Lab File ID: 1C091919.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 2.5514 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown hydrocarbon	29.47	870000	JD

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05D01

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61D01

Sample wt/vol: 30.016 (g/ml) G Lab File ID: 1C091918.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 2.8246 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/19/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3400	U
91-57-6	2-Methylnaphthalene	3400	U
208-96-8	Acenaphthylene	3400	U
83-32-9	Acenaphthene	3400	U
86-73-7	Fluorene	3400	U
85-01-8	Phenanthrene	3400	U
120-12-7	Anthracene	3400	U
206-44-0	Fluoranthene	3400	U
129-00-0	Pyrene	3400	U
56-55-3	Benzo[a]anthracene	3400	U
218-01-9	Chrysene	3400	U
205-99-2	Benzo[b]fluoranthene	3400	U J
207-08-9	Benzo[k]fluoranthene	3400	U J
50-32-8	Benzo[a]pyrene	3400	U J
193-39-5	Indeno[1,2,3-cd]pyrene	3400	U J
53-70-3	Dibenz[a,h]anthracene	3400	U J
191-24-2	Benzo[g,h,i]perylene	3400	U J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05D01

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61D01

Sample wt/vol: 30.016 (g/ml) G Lab File ID: 1C091918.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 2.8246 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/19/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown hydrocarbon	29.45	560000	JD
2.	unknown PAH	31.13	3400	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S02

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S02

Sample wt/vol: 30.0154 (g/ml) G Lab File ID: 1C091922.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 3.6614 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3500	U
91-57-6	2-Methylnaphthalene	3500	U
208-96-8	Acenaphthylene	3500	U
83-32-9	Acenaphthene	3500	U
86-73-7	Fluorene	3500	U
85-01-8	Phenanthrene	3500	U
120-12-7	Anthracene	3500	U
206-44-0	Fluoranthene	3500	U
129-00-0	Pyrene	3500	U J
56-55-3	Benzo[a]anthracene	3500	U J
218-01-9	Chrysene	3500	U J
205-99-2	Benzo[b]fluoranthene	3500	U J
207-08-9	Benzo[k]fluoranthene	3500	U J
50-32-8	Benzo[a]pyrene	3500	U J
193-39-5	Indeno[1,2,3-cd]pyrene	3500	U J
53-70-3	Dibenz[a,h]anthracene	3500	U J
191-24-2	Benzo[g,h,i]perylene	3500	U J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05S02

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S02

Sample wt/vol: 30.0154 (g/ml) G Lab File ID: 1C091922.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 3.6614 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 055282-68-3	1,1':3',1"-Tercyclopentane, 2'-dod	28.29	5300	JND
2. 022599-96-8	Cholestan-3-ol, 2-methylene-, (3.	28.89	8300	JND
3.	unknown hydrocarbon	31.88	1900000	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S03

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: _____ SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S03

Sample wt/vol: 30.4774 (g/ml) G Lab File ID: 1C091923.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 9.4987 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3600	U
91-57-6	2-Methylnaphthalene	3600	U
208-96-8	Acenaphthylene	3600	U
83-32-9	Acenaphthene	3600	U
86-73-7	Fluorene	3600	U
85-01-8	Phenanthrene	3600	U
120-12-7	Anthracene	3600	U
206-44-0	Fluoranthene	3600	U
129-00-0	Pyrene	3600	U J
56-55-3	Benzo[a]anthracene	3600	U J
218-01-9	Chrysene	3600	U J
205-99-2	Benzo[b]fluoranthene	3600	U J
207-08-9	Benzo[k]fluoranthene	3600	U J
50-32-8	Benzo[a]pyrene	3600	U J
193-39-5	Indeno[1,2,3-cd]pyrene	3600	U J
53-70-3	Dibenz[a,h]anthracene	3600	U J
191-24-2	Benzo[g,h,i]perylene	3600	U J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05S03

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: _____ SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S03

Sample wt/vol: 30.4774 (g/ml) G Lab File ID: 1C091923.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 9.4987 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

Number TICs found: 10 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	11.03	7300	JD
2.	unknown	12.05	4100	JD
3. 015869-94-0	Octane, 3,6-dimethyl- (CAS) $$ 3	12.59	4100	JND
4. 000629-50-5	Tridecane (CAS) $$ n-Tridecane	13.03	6100	JND
5. 000629-59-4	Tetradecane (CAS) $$ n-Tetrade	14.51	9000	JND
6. 000111-01-3	Tetracosane, 2,6,10,15,19,23-hex	15.34	3500	JND
7.	unknown	15.67	12000	JD
8. 000629-62-9	Pentadecane (CAS) $$ n-Pentad	15.89	6900	JND
9.	unknown	16.28	3300	JD
10.	unknown hydrocarbon	29.23	3600000	JD

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S04

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S04

Sample wt/vol: 29.971 (g/ml) G Lab File ID: 1C091924.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 26.7417 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	9100	U
91-57-6	2-Methylnaphthalene	9100	U
208-96-8	Acenaphthylene	9100	U
83-32-9	Acenaphthene	9100	U
86-73-7	Fluorene	9100	U
85-01-8	Phenanthrene	9100	U
120-12-7	Anthracene	9100	U
206-44-0	Fluoranthene	9100	U
129-00-0	Pyrene	9100	U
56-55-3	Benzo[a]anthracene	9100	U
218-01-9	Chrysene	9100	U
205-99-2	Benzo[b]fluoranthene	9100	U
207-08-9	Benzo[k]fluoranthene	9100	U
50-32-8	Benzo[a]pyrene	9100	U
193-39-5	Indeno[1,2,3-cd]pyrene	9100	U
53-70-3	Dibenz[a,h]anthracene	9100	U
191-24-2	Benzo[g,h,i]perylene	9100	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05S04

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: _____ SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S04

Sample wt/vol: 29.971 (g/ml) G Lab File ID: 1C091924.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 26.7417 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown hydrocarbon	30.17	450000	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S05

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S05

Sample wt/vol: 30.0006 (g/ml) G Lab File ID: 1C091925.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 12.3984 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3800	U
91-57-6	2-Methylnaphthalene	3800	U
208-96-8	Acenaphthylene	3800	U
83-32-9	Acenaphthene	3800	U
86-73-7	Fluorene	3800	U
85-01-8	Phenanthrene	3800	U
120-12-7	Anthracene	3800	U
206-44-0	Fluoranthene	3800	U
129-00-0	Pyrene	3800	U
56-55-3	Benzo[a]anthracene	3800	U
218-01-9	Chrysene	3800	U
205-99-2	Benzo[b]fluoranthene	3800	U J
207-08-9	Benzo[k]fluoranthene	3800	U J
50-32-8	Benzo[a]pyrene	3800	U J
193-39-5	Indeno[1,2,3-cd]pyrene	3800	U J
53-70-3	Dibenz[a,h]anthracene	3800	U J
191-24-2	Benzo[g,h,i]perylene	3800	U J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05S05

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S05

Sample wt/vol: 30.0006 (g/ml) G Lab File ID: 1C091925.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 12.3984 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 001330-20-7	XYLENE	5.13	2800	JND
2.	unknown hydrocarbon	29.47	170000	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S06

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S06

Sample wt/vol: 29.9872 (g/ml) G Lab File ID: 1C091926.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 19.8557 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	4200	U
91-57-6	2-Methylnaphthalene	4200	U
208-96-8	Acenaphthylene	4200	U
83-32-9	Acenaphthene	4200	U
86-73-7	Fluorene	4200	U
85-01-8	Phenanthrene	4200	U
120-12-7	Anthracene	4200	U
206-44-0	Fluoranthene	4200	U
129-00-0	Pyrene	4300	D
56-55-3	Benzo[a]anthracene	4200	U
218-01-9	Chrysene	4200	U
205-99-2	Benzo[b]fluoranthene	4200	U J
207-08-9	Benzo[k]fluoranthene	4200	U J
50-32-8	Benzo[a]pyrene	4200	U J
193-39-5	Indeno[1,2,3-cd]pyrene	4200	U J
53-70-3	Dibenz[a,h]anthracene	4200	U J
191-24-2	Benzo[g,h,i]perylene	4200	U J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2000RC05S06

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S06

Sample wt/vol: 29.9872 (g/ml) G Lab File ID: 1C091926.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 19.8557 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	000000-00-0	nonylphenol diethoxylate	24.35	2300	JND
2.		unknown hydrocarbon	29.47	310000	JD

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S07

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S07

Sample wt/vol: 30.043 (g/ml) G Lab File ID: 1C091927.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 18.5862 decanted:(Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	8200	U
91-57-6	2-Methylnaphthalene	8200	U
208-96-8	Acenaphthylene	8200	U
83-32-9	Acenaphthene	8200	U
86-73-7	Fluorene	8200	U
85-01-8	Phenanthrene	77000	D
120-12-7	Anthracene	15000	D
206-44-0	Fluoranthene	72000	D
129-00-0	Pyrene	68000	D
56-55-3	Benzo[a]anthracene	37000	D
218-01-9	Chrysene	41000	D
205-99-2	Benzo[b]fluoranthene	50000	D J
207-08-9	Benzo[k]fluoranthene	19000	D J
50-32-8	Benzo[a]pyrene	32000	D J
193-39-5	Indeno[1,2,3-cd]pyrene	16000	D J
53-70-3	Dibenz[a,h]anthracene	8200	U J
191-24-2	Benzo[g,h,i]perylene	20000	D J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

2000RC05S07

Lab Name: SHEFFIELD STEEL Contract: ML-10C

Lab Code: USEPA-R5 Case No.: 20000061 SAS No.: _____ SDG No.: GCMS026

Matrix: (soil/water) SOIL Lab Sample ID: 61S07

Sample wt/vol: 30.043 (g/ml) G Lab File ID: 1C091927.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: 18.5862 decanted: (Y/N) N Date Extracted: 08/28/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/20/00

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

Number TICs found: 10 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000132-65-0	Dibenzothiophene (CAS) $$ 9-Th	19.31	5100	JND
2. 000613-12-7	Anthracene, 2-methyl- (CAS) $$	20.91	13000	JND
3.	unknown PAH	21.17	13000	JD
4. 000084-65-1	9,10-Anthracenedione (CAS) $$	21.73	13000	JND
5.	unknown PAH	24.18	8300	JD
6.	unknown hydrocarbon	29.13	950000	JD
7.	unknown PAH	29.58	17000	JD
8.	unknown PAH	31.95	5300	JD
9.	unknown PAH	36.18	5800	JD
10.	unknown PAH	36.47	9100	JD

Collier Shannon Scott, PLLC
Washington Harbour, Suite 400
3050 K Street, NW
Washington, DC 20007-5108
202.342.8400 TEL
202.342.8451 FAX

JOHN L. WITTENBORN
202.342.8514
jwittenborn@colliershannon.com

Collier Shannon Scott

October 24, 2000

VIA FACSIMILE (312) 886-1515

Freedom of Information Officer
U.S. EPA Region 5 (MRI-9J)
77 West Jackson Blvd.
Chicago, IL 60604-3590

Re: Sheffield Steel – Joliet Facility, EPA I.D. No. ILD151759258

Dear Sir or Madam:

Pursuant to the Freedom of Information Act, 5 U.S.C. § 552 et. seq., we hereby request copies of all records in the custody or control of the United States Environmental Protection Agency ("EPA") regarding all of the soil samples EPA or its agents took on August 23, 2000, at Sheffield Steel Corporation - Joliet plant site, located at One Industry Avenue, Joliet, Illinois, 60434.

This request includes, but is not limited to, documents containing the following information:

(1) the locations at the Joliet plant site from which each sample was taken;
(2) description of the sampling protocol used including the number of samples taken;
(3) description of the testing procedure used and the constituents for which EPA tested; and
(4) the concentrations of each of these constituents.

We agree to pay all reasonable costs associated with responding to this request. Our taxpayer identification number is 52-1231464. If costs are to exceed $500, please call us with an estimate prior to proceeding.

If you have any questions, please contact us at (202) 342-8514.

Sincerely,

JOHN L. WITTENBORN
CHRISTINA B. PARASCANDOLA
Counsel to Sheffield Steel Corporation

cc: Douglas Strickland
Sheffield Steel Corporation

Deirdre Flannery-Tanaka, Esq.
U.S. Environmental Protection Agency - Region V

Patrick Kuefler

Sarah Monette

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: OCT 0 4 2000

Subject: Review of Region 5 Data for Sheffield Steel

From: Matthew Knopp , Chemist MK 9.29.00
Region 5 Central Regional Laboratory

To: Patrick Kuefler
DRE-8J

Attached are the results for Site: Sheffield Steel
CRL Data Set Number: 20000061
for analyses of : Arsenic and Seleniumm
Results are reported for sample numbers: 2000RC05S01-S08 and D01

Results Status:
( ) Acceptable for Use
(X) Data Qualified, but Acceptable for use
( ) Data Unacceptable for Use

Sylvia Griffin OCT 0 4 2000 As, Se

CRL Data Management Coordinator and Date Received

Date Transmitted: OCT 0 4 2000

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML - 10C

Received by and Date

Comments:

Site Name: SHEFFIELD STEEL **Method Number: AA METALS**
Date Generated: 09.29.00 **Data Set #: 20000061**

GFAA NARRATIVE for Data Set 20000061

Nine soil samples (2000RC05S01-S08 and D01) were submitted for the analysis of total arsenic and selenium by Graphite Furnace Atomic Absorption (GFAA). The samples were collected on 08.23.00 and were received by the CRL on 08.24.00.

The samples were digested for arsenic and selenium following the 200.2 hot block standard digestion protocols for soil samples. The sample was digested by K. Swan on 09.13.00 (digestion number 1212). Sample analysis began on 09.18.00 and was completed on 09.19.00.

All analytical results files, sample information files and reformat files for arsenic and selenium can be found on the R5CRL data server using the following paths:
h:\r5crl\vol3\metals\mknopp\20000061\SIMAA\

The narrative, QC summary spreadsheets, sample result calculation spreadsheets and the final sample report for arsenic and selenium can be found on the R5CRL data server using the following path:
h:\r5crl\vol3\metals\mknopp\20000061\GFAA\

* Please note: In-house control limits have not been established for the PE SIMAA 6000 methods at this time. Interim limits were used to evaluate the data.

* Please note: The raw data erroneously shows sample 2000RC05D01 as 2000RC01D01. This was an analyst error during analysis and was corrected on the final sample report.

* Please note: Results from the analytical run that took place on 09.18.00 were erroneously appended to results file 071900 in the AsSe directory on the (C:) drive of the instrument. The entire 071900 results file was subsequently copied from the (C:) drive and placed into the h:\r5crl\vol3\metals\mknopp\20000061\SIMAA\ directory.

Narrative by: M. Knopp Chemist, USEPA
Date: 9-29-00

Arsenic

Results file 091800

The recovery (73.5%) for the Reporting Level Check (RLC) standard was outside the interim control limits of 100 +/- 20%. The RLC limits are intended to be used as guidance limits. The instrument was successfully calibrated using a calibration standard at the RLC limit. Therefore, the analyst believes that this audit failure does not have a significant impact on the data.

The recovery (137.45%) on the matrix spike of sample 2000RC05S06 was outside of the interim soil control limits of 100 +/- 20%. This is most likely due to an inhomogeneous sample. However, all associated data were flagged with a (J) to indicate possible high bias.

All remaining QC were within the specified interim control limits.

All arsenic data are acceptable with qualification.

Results file 091900

All QC were within the specified interim control limits.

All arsenic data are acceptable with qualification.

Selenium

Results file 091800

* Please note: Most, if not all, of the analytical spikes were biased high and outside of the interim control limits of 100 +/-10%. This is acceptable because the sample results are all below the CRL reporting limit.

The result of the soil Laboratory Control Sample (LQM) (1.23 μg Se/L) before being converted to mg/Kg and corrected for dilution, was below the CRL reporting limit of 2.5 μg Se/L. However, the result was above the CRL method detection limit of 1 μg Se/L. This was discussed with the CRL metals group leader and was deemed to be an acceptable result for QC calculation purposes.

Narrative by: M. Kapp Chemist, USEPA
Date: 3 29 00

All remaining QC were within the specified interim control limits.

All selenium data are acceptable.

Results file 091900

Results for selenium were not derived from this analytical run.

Narrative by: M. Kopp Chemist, USEPA
Date: 9.29.00

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required ***D***ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations ***E***xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. The reported value is considered to be estimated
J	This flag is used when the analyte is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (*J* is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL ***M***ethod Detection Limit (MDL) but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is estimated due to its presence in this concentration range.
N	This flag applies to GC/MS Te***N***tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

4/11/00

DATA SET: 20000061

FINAL GFAA SAMPLE REPORT (SOIL SAMPLES)

SAMPLE ID	As Final Result (mg/Kg)	As Qualifier	Se Final Result (mg/Kg)	Se Qualifier
2000RC05S01	47.2	DJ	2.4	DU
2000RC05D01	44.5	DJ	2.6	DU
2000RC05S02	38.0	DJ	2.4	DU
2000RC05S03	26.8	DJ	1.3	DU
2000RC05S04	21.8	DJ	1.3	DU
2000RC05S05	18.0	DJ	1.2	DU
2000RC05S06	37.3	DJ	1.3	DU
2000RC05S07	23.5	DJ	1.3	DU
2000RC05S08	26.0	DJ	1.3	DU

Analyst: M. Kryger

Date: 9.29.00

2000CR61

ENVIRONMENTAL PROTECTION AGENCY 901620
FOR THE TEAM METALS

DIVISION/BRANCH RCRA SAMPLING DATE 8/23/00 LAB ARRIVAL DATE 8/24/00 DUE DATE 10/9/00

DU NUMBER 901620 DATASET ALIAS 2000CR61 STUDY SHEFFIELD STEEL PRIORITY CONTRACTOR TECHLAW

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S TOTAL ICAP MG/KG (DRY WT.) MET1613	SEDIMENTS SOLID S AS MG/KG (DRY WT.) MET7063	SEDIMENTS SOLID S Hg MG/KG (DRY WT.) MET7203	SEDIMENTS SOLID S SE MG/KG (DRY WT.) MET7213	SEDIMENTS SOLID S TL MG/KG (DRY WT.) MET7223
2000CR05						
014 — S01	5-063995/063999	X	X	X	X	
033 — D01	5-063462	X	X	X	X	
015 — S02	5-063448	X	X	X	X	
043 — S03	5-063450	X	X	X	X	
034 — S04	5-063453	X	X	X	X	
021 — S05	5-063455	X	X	X	X	
037 — S06	5-063457	X	X	X	X	
024 — S07	5-063459	X	X	X	X	
022 — S08	5-063461	X	X	X	X	
23 — S01						

DATA SET: 20000061

FINAL GFAA SAMPLE REPORT (SOIL SAMPLES)

SAMPLE ID	As Final Result (mg/Kg)	As Qualifier	Se Final Result (mg/Kg)	Se Qualifier
2000RC05S01	47.2	DJ	2.4	DU
2000RC05D01	44.5	DJ	2.6	DU
2000RC05S02	38.0	DJ	2.4	DU
2000RC05S03	26.8	DJ	1.3	DU
2000RC05S04	21.8	DJ	1.3	DU
2000RC05S05	18.0	DJ	1.2	DU
2000RC05S06	37.3	DJ	1.3	DU
2000RC05S07	23.5	DJ	1.3	DU
2000RC05S08	26.0	DJ	1.3	DU

Analyst: M. Knapp

Date: 9 29 00

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: OCT 0 2 2000

Subject: Review of Region 5 Data for Sheffield Steel

From: Nidia Fuentes , Chemist NF
Region 5 Central Regional Laboratory

To: Patrick Kuefler
DRE-8J

Attached are the results for Site: Sheffield Steel
CRL Data Set Number: 2000 0061
for analyses of : VOA - Soil
Results are reported for sample numbers: 2000RC05S01, S02, S03, S04, S05, S06, S07 and D02

Results Status:
(X) Acceptable for Use
(X) Data Qualified, but Acceptable for use
( ) Data Unacceptable for Use

Sylvia Griffin OCT 0 2 2000

CRL Data Management Coordinator and Date Received

Date Transmitted: OCT 0 2 2000

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML - 10C

Received by and Date

Comments:

20000061

90102D

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAMS TOXIC SUBSTANCES

DIVISION/BRANCH RCRA SAMPLING DATE 8/23/00 LAB ARRIVAL DATE 8/24/00 DUE DATE 10/9/2000

DU NUMBER 90102D DATASET NUMBER 20000061 STUDY SHEFFIELD STEEL PRIORITY _____ CONTRACTOR TECHLAW

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ABN ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX215622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX215722
2000RC05					
S01	5-063447/5063477				X
D01	5-063465				X
S02	5-063449				X
S03	5-063452				X
S04	5-063454				X
S05	5-063456				X
S06	5-063458				X
S07	5-063460				X
S01	5-063466			X	
S02	5-063467			X	
S03	5-063468			X	
S04	5-063469			X	
S05	5-063470			X	
S06	5-063471			X	
S07	5-063472			X	
D02	5-063463			X	

CRL V.2: 3/85

QC Review CRL Data ~~Validation~~ Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. / Biology -
D	This flag is used when the analyte concentration results from a required ***D***ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations ***E***xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. The reported value is considered to be estimated
J	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL reporting limit (RL) but the quantitated value is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. (***J*** is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.) (including H.T.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL ***M***ethod Detection Limit (MDL) but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is estimated due to its presence in this concentration range.
N	This flag applies to GC/MS TICs that have ***N***o mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag. / Biology
U	This flag in used when the analyte was analyzed but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

Case Narrative — sukn ?

CASE NARRATIVE

DATE: September 19, 2000

PROJECT NAME: Sheffield Steel- CRL Case #:20000061
Analysis of Volatile Organic Analytes (VOA)

ANALYST: Nidia Fuentes, Chemist NF

REVIEWER: Babu Paruchuri, GC/MS Team Leader FOR BP - RWR

I. CASE DESCRIPTION:

The laboratory received eight encore-soil samples (2000RC05S01 to S07 and D02) on 08/24/00 for volatile organic analyte (VOA) analysis. These samples were preserved in the lab with sodium bisulfate within the recommended time frame. Samples were analyzed on 08/31/00 by the CRL Method GCMS001, on instrument #4. The laboratory met sample analysis holding time criteria for all samples. (QC Criteria for soil preserved sample analysis holding time: 14 days from the date of collection.) These samples were received at the laboratory in good condition.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** On each day of analysis, the GC/MS instrument (HP-MSD#4) performance checks were made to determine whether the instrument met the EPA tuning criteria for p-BFB (QC Criteria: Same as the CWA's criteria). No problems were observed.

2. **Initial Calibration Check:** An acceptable five point initial calibration (IC) curve (QC Criteria for IC: %RSD should be $\leq$ 35%) is required for all target compounds before samples can be analyzed. The lab generated one IC curve. Data was generated on 8/16/00, having a few outliers, corresponding to acrolein, acrylonitrile and 2-butanone data had been flagged as estimated. Methylene chloride and acrolein have three levels of the calibration. Their reporting limits were adjusted accordingly.

3. **Continuing Calibration Check:** One continuing calibration check (CCC) standard was evaluated to analyze the site samples. The CCC data generated on 08/31/2000 met the CRL QC requirements for all compounds (QC Criteria for CC: %D should be $\leq$ 30%.) except for acrolein and 2-butanone. All site samples were analyzed by this calibration and flagged as

estimated `J' for compounds mentioned above.

4. **Internal Standard (IS) Area and Retention Time (RT) Summary:** Samples 2000RC05S03 and S02MSD, failed the three internal standard (IS) area QC requirements, sample S04, S05, S06, D02 and S02MS, chlorobenzene-d5 IS not meet QC requirements. Affected compounds had been flagged as estimated `J'. The samples were reanalyzed and, if same results were obtained first results were used for reporting results.

III. METHOD QUALITY CONTROL:

1. **Method Blank Results:** On the each day of sample analysis, 5-ml of reagent water with 5 gram of clean soil (ottawa sand) was spiked with internal standards and surrogates and was analyzed to check the GC/MS and purge and trap systems. Acetone was found in method blank, two other targets compounds 2-butanone and naphthalene were also detected at levels below the CRL reporting limits and therefore were not reported. Site samples analyzed after this lab blank and positive for compound mentioned above had been flagged as `B' for found in blank. A second blank was analyzed with sodium bisulfate used for the preservation of sample, acetone was present and no TIC.

2. **Surrogate Spike Compound Results:** The surrogate spike compound recovery data were within the CRL's QC limits for three out of eight site samples. Surrogate: toluene-d8 was out of the QC limits in samples 2000RC05S03, MS and MSD. No data is qualified when only one surrogate is outside the QC requirement limits, as per the CRL SOP.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:** The laboratory collected site-specific matrix precision and accuracy (P&A) data using the site sample 2000RC05S02. A few percent recoveries were biased high from S02MS. No more sample was available for reanalysis. No qualification is required.

4. **Laboratory Control Sample (LCS):** Not applicable.

5. **Performance Evaluation Sample (PES):** Not applicable. QC Criteria for the PES: Control Limits are established by EMSL-LV.

IV. SAMPLE RESULTS:

The laboratory generated data of acceptable quality. Samples not meeting the QC criteria for internal standard were re-analyzed. If results were remained not acceptable, first analysis was used for reporting purposes, no other problem was observed.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: _____ SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 5.0 (g/ml) G Lab File ID: 4C083103.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 0 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
107-64-1	Acrolein	500	U J
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	17	
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	100	U
107-13-1	Acrylonitrile	10	U J
75-34-3	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	25	U J
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	20	U
108-88-3	Toluene	5	U
000110-75-8	2-Chloroether vinyl ether	10	U
10061-01-5	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1083836423	m- &/or p-Xylene	5	U

mt 9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 5.0 (g/ml) G Lab File ID: 4C083103.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 0 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
96-18-4	1,2,3-Trichloropropane	15	U
108-86-1	Bromobenzene	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
106-43-4	4-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	20	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LAB BLANK

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: LAB BLANK

Sample wt/vol: 5.0 (g/ml) G Lab File ID: 4C083103.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 0 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.52	9	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DIUM BISUL-BLA

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: SODIUM BISUL- B

Sample wt/vol: 5.0 (g/ml) G Lab File ID: 4C083104.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 0 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
107-64-1	Acrolein	500	UJ
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	15	B
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	100	U
107-13-1	Acrylonitrile	10	UJ
75-34-3	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	25	UJ
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	20	U
108-88-3	Toluene	5	U
000110-75-8	2-Chloroether vinyl ether	10	U
10061-01-5	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1083836423	m- &/or p-Xylene	5	U

9/28/00

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DIUM BISUL-BLA

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: SODIUM BISUL- B

Sample wt/vol: 5.0 (g/ml) G Lab File ID: 4C083104.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 0 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
96-18-4	1,2,3-Trichloropropane	15	U
108-86-1	Bromobenzene	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
106-43-4	4-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	20	U
87-61-6	1,2,3-Trichlorobenzene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DIUM BISUL-BLA

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: SODIUM BISUL- B

Sample wt/vol: 5.0 (g/ml) G Lab File ID: 4C083104.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 0 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S03

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S03

Sample wt/vol: 5.1 (g/ml) G Lab File ID: 4C083108.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 9.497 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
107-64-1	Acrolein	540	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	1900	EB
75-15-0	Carbon disulfide	23	
75-09-2	Methylene chloride	110	U
107-13-1	Acrylonitrile	11	U
75-34-3	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	630	
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	62	
108-88-3	Toluene	6	
000110-75-8	2-Chloroether vinyl ether	11	U
10061-01-5	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	110	
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	
1083836423	m- &/or p-Xylene	21	

mt 9/28/00

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S03

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S03

Sample wt/vol: 5.1 (g/ml) G Lab File ID: 4C083108.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 9.497 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	9	
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
96-18-4	1,2,3-Trichloropropane	16	U
108-86-1	Bromobenzene	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
106-43-4	4-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	8	
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	23	
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	11	U
96-12-8	1,2-Dibromo-3-chloropropane	22	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	22	U
87-61-6	1,2,3-Trichlorobenzene	11	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2000RC05S03

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S03

Sample wt/vol: 5.1 (g/ml) G Lab File ID: 4C083108.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 9.497 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 12

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000115-11-7	1-Propene, 2-methyl- (CAS) $$ 2-	3.41	230	JN
2. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.52	19	JN
3. 000123-72-8	Butanal (CAS) $$ n-Butanal $$ B	7.02	13	JN
4.	unknown hydrocarbon	9.53	12	J
5. 000110-62-3	Pentanal (CAS) $$ n-Pentanal $$	9.68	14	JN
6.	unknown hydrocarbon	11.56	13	J
7.	unknown hydrocarbon	11.84	39	J
8. 000066-25-1	Hexanal (CAS) $$ n-Hexanal $$	12.85	44	JN
9.	unknown hydrocarbon	15.63	13	J
10. 000110-43-0	2-HEPTANONE	16.14	41	JN
11. 000111-71-7	Heptanal (CAS) $$ n-Heptanal $$	16.41	42	JN
12. 000928-68-7	2-Heptanone, 6-methyl- (CAS) $$	18.22	14	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S04

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S04

Sample wt/vol: 3.3 (g/ml) G Lab File ID: 4C083109.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 26.74 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	21	U
74-83-9	Bromomethane	21	U
75-00-3	Chloroethane	21	U
107-64-1	Acrolein	1000	UJ
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	280	B
75-15-0	Carbon disulfide	10	U
75-09-2	Methylene chloride	210	U
107-13-1	Acrylonitrile	21	UJ
75-34-3	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	53	J
156-59-2	cis-1,2-Dichloroethene	10	U
594-20-7	2,2-Dichloropropane	10	U
74-97-5	Bromochloromethane	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
563-58-6	1,1-Dichloropropene	10	U
56-23-5	Carbon tetrachloride	10	U
107-06-2	1,2-Dichloroethane	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	21	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	12	
000110-75-8	2-Chloroether vinyl ether	21	U
10061-01-5	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
142-28-9	1,3-Dichloropropane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	52	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1083836423	m- &/or p-Xylene	10	U

MA 9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S04

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S04

Sample wt/vol: 3.3 (g/ml) G Lab File ID: 4C083109.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 26.74 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	31	U
96-18-4	1,2,3-Trichloropropane	31	U
108-86-1	Bromobenzene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
99-87-6	p-Isopropyltoluene	10	U
541-73-1	1,3-Dichlorobenzene	21	U
106-46-7	1,4-Dichlorobenzene	21	U
104-51-8	n-Butylbenzene	10	UJ
95-50-1	1,2-Dichlorobenzene	21	UJ
96-12-8	1,2-Dibromo-3-chloropropane	42	UJ
120-82-1	1,2,4-Trichlorobenzene	10	UJ
87-68-3	Hexachlorobutadiene	10	UJ
91-20-3	Naphthalene	42	UJ
87-61-6	1,2,3-Trichlorobenzene	21	UJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2000RC05S04

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S04

Sample wt/vol: 3.3 (g/ml) G Lab File ID: 4C083109.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 26.74 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 11

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	4.43	9	J
2. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.51	10	JN
3.	unknown	9.71	17	J
4. 000066-25-1	N-HEXANAL $$ CAPROALDEHY	12.85	82	JN
5. 000111-27-3	1-Hexanol (CAS) $$ n-Hexanol $	15.60	20	JN
6. 000111-71-7	HEPTANAL	16.42	17	JN
7.	unknown	18.62	6	J
8.	unknown hydrocarbon	19.39	13	J
9.	unknown hydrocarbon	20.14	7	J
10.	unknown hydrocarbon	20.99	11	J
11. 000000-00-0	NONANAL	21.55	10	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S05

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S05

Sample wt/vol: 4.4 (g/ml) G Lab File ID: 4C083110.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 12.39 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-00-3	Chloroethane	13	U
107-64-1	Acrolein	650	U J
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	170	B
75-15-0	Carbon disulfide	6	U
75-09-2	Methylene chloride	130	U
107-13-1	Acrylonitrile	13	U J
75-34-3	trans-1,2-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
78-93-3	2-Butanone	32	J J 9/27
156-59-2	cis-1,2-Dichloroethene	6	U
594-20-7	2,2-Dichloropropane	6	U
74-97-5	Bromochloromethane	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
563-58-6	1,1-Dichloropropene	6	U
56-23-5	Carbon tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	14	
78-87-5	1,2-Dichloropropane	13	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-10-1	4-Methyl-2-pentanone	26	U
108-88-3	Toluene	6	U
000110-75-8	2-Chloroether vinyl ether	13	U
10061-01-5	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U
142-28-9	1,3-Dichloropropane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	32	U
124-48-1	Dibromochloromethane	6	U
106-93-4	1,2-Dibromoethane	6	U
108-90-7	Chlorobenzene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
100-41-4	Ethylbenzene	6	U
1083836423	m- &/or p-Xylene	6	U

MA 9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S05

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S05

Sample wt/vol: 4.4 (g/ml) G Lab File ID: 4C083110.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 12.39 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
98-82-8	Isopropylbenzene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	19	U
96-18-4	1,2,3-Trichloropropane	19	U
108-86-1	Bromobenzene	6	U
103-65-1	n-Propylbenzene	6	U
95-49-8	2-Chlorotoluene	6	U
106-43-4	4-Chlorotoluene	6	U
108-67-8	1,3,5-Trimethylbenzene	6	U
98-06-6	tert-Butylbenzene	6	U
95-63-6	1,2,4-Trimethylbenzene	6	U
135-98-8	sec-Butylbenzene	6	U
99-87-6	p-Isopropyltoluene	6	U
541-73-1	1,3-Dichlorobenzene	13	U
106-46-7	1,4-Dichlorobenzene	13	U
104-51-8	n-Butylbenzene	6	U J
95-50-1	1,2-Dichlorobenzene	13	U J
96-12-8	1,2-Dibromo-3-chloropropane	26	U J
120-82-1	1,2,4-Trichlorobenzene	6	U J
87-68-3	Hexachlorobutadiene	6	U J
91-20-3	Naphthalene	26	U J
87-61-6	1,2,3-Trichlorobenzene	13	U J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2000RC05S05

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S05

Sample wt/vol: 4.4 (g/ml) G Lab File ID: 4C083110.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 12.39 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 9

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.51	24	JN
2. 000123-38-6	Propanal (CAS) $$ Propionaldeh	5.03	5	JN
3. 000110-54-3	Hexane (CAS) $$ n-Hexane $$ S	6.32	11	JN
4. 000123-72-8	Butanal (CAS) $$ n-Butanal $$ B	7.02	6	JN
5. 000110-62-3	Pentanal (CAS) $$ n-Pentanal $$	9.68	14	JN
6. 000066-25-1	Hexanal (CAS) $$ n-Hexanal $$	12.85	130	JN
7. 000111-71-7	Heptanal (CAS) $$ n-Heptanal $$	16.42	10	JN
8. 018172-67-3	I-.beta.-Pinene $$ Bicyclo[3.1.1]h	18.25	11	JN
9.	unknown hydrocarbon	19.39	5	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S06

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S06

Sample wt/vol: 4.5 (g/ml) G Lab File ID: 4C083111.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 19.85 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-00-3	Chloroethane	14	U
107-64-1	Acrolein	690	U J
75-35-4	1,1-Dichloroethene	7	U
67-64-1	Acetone	140	B
75-15-0	Carbon disulfide	7	U
75-09-2	Methylene chloride	140	U
107-13-1	Acrylonitrile	14	U J
75-34-3	trans-1,2-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
78-93-3	2-Butanone	35	U J
156-59-2	cis-1,2-Dichloroethene	7	U
594-20-7	2,2-Dichloropropane	7	U
74-97-5	Bromochloromethane	7	U
67-66-3	Chloroform	7	U
71-55-6	1,1,1-Trichloroethane	7	U
563-58-6	1,1-Dichloropropene	7	U
56-23-5	Carbon tetrachloride	7	U
107-06-2	1,2-Dichloroethane	7	U
71-43-2	Benzene	7	U
79-01-6	Trichloroethene	180	
78-87-5	1,2-Dichloropropane	14	U
75-27-4	Bromodichloromethane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
108-10-1	4-Methyl-2-pentanone	28	U
108-88-3	Toluene	7	U
000110-75-8	2-Chloroether vinyl ether	14	U
10061-01-5	trans-1,3-Dichloropropene	7	U
79-00-5	1,1,2-Trichloroethane	7	U
142-28-9	1,3-Dichloropropane	7	U
127-18-4	Tetrachloroethene	7	U
591-78-6	2-Hexanone	35	U
124-48-1	Dibromochloromethane	7	U
106-93-4	1,2-Dibromoethane	7	U
108-90-7	Chlorobenzene	7	U
630-20-6	1,1,1,2-Tetrachloroethane	7	U
100-41-4	Ethylbenzene	7	U
1083836423	m- &/or p-Xylene	7	U

MT 9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S06

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S06

Sample wt/vol: 4.5 (g/ml) G Lab File ID: 4C083111.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 19.85 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	7	U
100-42-5	Styrene	7	U
75-25-2	Bromoform	7	U
98-82-8	Isopropylbenzene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	21	U
96-18-4	1,2,3-Trichloropropane	21	U
108-86-1	Bromobenzene	7	U
103-65-1	n-Propylbenzene	7	U
95-49-8	2-Chlorotoluene	7	U
106-43-4	4-Chlorotoluene	7	U
108-67-8	1,3,5-Trimethylbenzene	7	U
98-06-6	tert-Butylbenzene	7	U
95-63-6	1,2,4-Trimethylbenzene	7	U
135-98-8	sec-Butylbenzene	7	U
99-87-6	p-Isopropyltoluene	7	U
541-73-1	1,3-Dichlorobenzene	14	U
106-46-7	1,4-Dichlorobenzene	14	U
104-51-8	n-Butylbenzene	7	UJ
95-50-1	1,2-Dichlorobenzene	14	UJ
96-12-8	1,2-Dibromo-3-chloropropane	28	UJ
120-82-1	1,2,4-Trichlorobenzene	7	UJ
87-68-3	Hexachlorobutadiene	7	UJ
91-20-3	Naphthalene	28	UJ
87-61-6	1,2,3-Trichlorobenzene	14	UJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2000RC05S06

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S06

Sample wt/vol: 4.5 (g/ml) G Lab File ID: 4C083111.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 19.85 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 9

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.51	7	JN
2. 000066-25-1	N-HEXANAL $$ CAPROALDEHY	12.85	4	JN
3.	unknown hydrocarbon	17.68	5	J
4.	unknown hydrocarbon	17.95	10	J
5. 013395-76-1	Cyclohexanone, 2,3-dimethyl- (C	18.83	17	JN
6.	unknown hydrocarbon	19.01	22	J
7.	unknown hydrocarbon	19.31	47	J
8.	unknown	19.83	37	J
9. 000000-00-0	NONANAL	21.55	5	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S07

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: _____ SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S07

Sample wt/vol: 2.1 (g/ml) G Lab File ID: 4C083112.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 18.55 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	30	U
74-83-9	Bromomethane	30	U
75-00-3	Chloroethane	30	U
107-64-1	Acrolein	1500	UJ
75-35-4	1,1-Dichloroethene	15	U
67-64-1	Acetone	150	B
75-15-0	Carbon disulfide	15	U
75-09-2	Methylene chloride	300	U
107-13-1	Acrylonitrile	30	UJ
75-34-3	trans-1,2-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
78-93-3	2-Butanone	74	UJ
156-59-2	cis-1,2-Dichloroethene	15	U
594-20-7	2,2-Dichloropropane	15	U
74-97-5	Bromochloromethane	15	U
67-66-3	Chloroform	15	U
71-55-6	1,1,1-Trichloroethane	15	U
563-58-6	1,1-Dichloropropene	15	U
56-23-5	Carbon tetrachloride	15	U
107-06-2	1,2-Dichloroethane	15	U
71-43-2	Benzene	15	U
79-01-6	Trichloroethene	15	U
78-87-5	1,2-Dichloropropane	30	U
75-27-4	Bromodichloromethane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
108-10-1	4-Methyl-2-pentanone	59	U
108-88-3	Toluene	15	U
000110-75-8	2-Chloroether vinyl ether	30	U
10061-01-5	trans-1,3-Dichloropropene	15	U
79-00-5	1,1,2-Trichloroethane	15	U
142-28-9	1,3-Dichloropropane	15	U
127-18-4	Tetrachloroethene	15	U
591-78-6	2-Hexanone	74	U
124-48-1	Dibromochloromethane	15	U
106-93-4	1,2-Dibromoethane	15	U
108-90-7	Chlorobenzene	15	U
630-20-6	1,1,1,2-Tetrachloroethane	15	U
100-41-4	Ethylbenzene	15	U
1083836423	m- &/or p-Xylene	15	U

mt 9/28/00

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

2000RC05S07

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: _____ SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S07

Sample wt/vol: 2.1 (g/ml) G Lab File ID: 4C083112.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 18.55 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	15	U
100-42-5	Styrene	15	U
75-25-2	Bromoform	15	U
98-82-8	Isopropylbenzene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	44	U
96-18-4	1,2,3-Trichloropropane	44	U
108-86-1	Bromobenzene	15	U
103-65-1	n-Propylbenzene	15	U
95-49-8	2-Chlorotoluene	15	U
106-43-4	4-Chlorotoluene	15	U
108-67-8	1,3,5-Trimethylbenzene	15	U
98-06-6	tert-Butylbenzene	15	U
95-63-6	1,2,4-Trimethylbenzene	15	U
135-98-8	sec-Butylbenzene	15	U
99-87-6	p-Isopropyltoluene	15	U
541-73-1	1,3-Dichlorobenzene	30	U
106-46-7	1,4-Dichlorobenzene	30	U
104-51-8	n-Butylbenzene	15	U
95-50-1	1,2-Dichlorobenzene	30	U
96-12-8	1,2-Dibromo-3-chloropropane	59	U
120-82-1	1,2,4-Trichlorobenzene	15	U
87-68-3	Hexachlorobutadiene	15	U
91-20-3	Naphthalene	59	U
87-61-6	1,2,3-Trichlorobenzene	30	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2000RC05S07

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S07

Sample wt/vol: 2.1 (g/ml) G Lab File ID: 4C083112.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 18.55 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 4

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000000-00-0	METHYLCYCLOHEXANE	9.61	10	JN
2.	unknown hydrocarbon	17.68	9	J
3.	unknown hydrocarbon	19.39	9	J
4. 000000-00-0	NONANAL	21.55	14	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S01

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S01

Sample wt/vol: 8.6 (g/ml) G Lab File ID: 4C083113.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 2.5514 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
107-64-1	Acrolein	300	U J
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	89	B
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	J, nf
107-13-1	Acrylonitrile	6	U
75-34-3	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
78-93-3	2-Butanone	18	J
156-59-2	cis-1,2-Dichloroethene	3	U
594-20-7	2,2-Dichloropropane	3	U
74-97-5	Bromochloromethane	3	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
563-58-6	1,1-Dichloropropene	3	U
56-23-5	Carbon tetrachloride	3	U
107-06-2	1,2-Dichloroethane	3	U
71-43-2	Benzene	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	6	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	3	U
000110-75-8	2-Chloroether vinyl ether	6	U
10061-01-5	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
142-28-9	1,3-Dichloropropane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	15	U
124-48-1	Dibromochloromethane	3	U
106-93-4	1,2-Dibromoethane	3	U
108-90-7	Chlorobenzene	3	U
630-20-6	1,1,1,2-Tetrachloroethane	3	U
100-41-4	Ethylbenzene	3	U
1083836423	m- &/or p-Xylene	3	U

mf 9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S01

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: _____ SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S01

Sample wt/vol: 8.6 (g/ml) G Lab File ID: 4C083113.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 2.5514 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
98-82-8	Isopropylbenzene	3	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
96-18-4	1,2,3-Trichloropropane	9	U
108-86-1	Bromobenzene	3	U
103-65-1	n-Propylbenzene	3	U
95-49-8	2-Chlorotoluene	3	U
106-43-4	4-Chlorotoluene	3	U
108-67-8	1,3,5-Trimethylbenzene	3	U
98-06-6	tert-Butylbenzene	3	U
95-63-6	1,2,4-Trimethylbenzene	3	U
135-98-8	sec-Butylbenzene	3	U
99-87-6	p-Isopropyltoluene	3	U
541-73-1	1,3-Dichlorobenzene	6	U
106-46-7	1,4-Dichlorobenzene	6	U
104-51-8	n-Butylbenzene	3	U
95-50-1	1,2-Dichlorobenzene	6	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	3	U
87-68-3	Hexachlorobutadiene	3	U
91-20-3	Naphthalene	12	U
87-61-6	1,2,3-Trichlorobenzene	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2000RC05S01

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S01

Sample wt/vol: 8.6 (g/ml) G Lab File ID: 4C083113.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 2.5514 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S02

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S02

Sample wt/vol: 6.7 (g/ml) G Lab File ID: 4C083114.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 3.6614 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	8	U
74-83-9	Bromomethane	8	U
75-00-3	Chloroethane	8	U
107-64-1	Acrolein	390	UJ
75-35-4	1,1-Dichloroethene	4	U
67-64-1	Acetone	93	B
75-15-0	Carbon disulfide	4	U
75-09-2	Methylene chloride	78	U
107-13-1	Acrylonitrile	8	UJ
75-34-3	trans-1,2-Dichloroethene	4	U
75-34-3	1,1-Dichloroethane	4	U
78-93-3	2-Butanone	19	UJ
156-59-2	cis-1,2-Dichloroethene	4	U
594-20-7	2,2-Dichloropropane	4	U
74-97-5	Bromochloromethane	4	U
67-66-3	Chloroform	4	U
71-55-6	1,1,1-Trichloroethane	4	U
563-58-6	1,1-Dichloropropene	4	U
56-23-5	Carbon tetrachloride	4	U
107-06-2	1,2-Dichloroethane	4	U
71-43-2	Benzene	4	U
79-01-6	Trichloroethene	4	U
78-87-5	1,2-Dichloropropane	8	U
75-27-4	Bromodichloromethane	4	U
10061-01-5	cis-1,3-Dichloropropene	4	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	4	U
000110-75-8	2-Chloroether vinyl ether	8	U
10061-01-5	trans-1,3-Dichloropropene	4	U
79-00-5	1,1,2-Trichloroethane	4	U
142-28-9	1,3-Dichloropropane	4	U
127-18-4	Tetrachloroethene	4	U
591-78-6	2-Hexanone	19	U
124-48-1	Dibromochloromethane	4	U
106-93-4	1,2-Dibromoethane	4	U
108-90-7	Chlorobenzene	4	U
630-20-6	1,1,1,2-Tetrachloroethane	4	U
100-41-4	Ethylbenzene	4	U
1083836423	m- &/or p-Xylene	4	U

MT 9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05S02

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S02

Sample wt/vol: 6.7 (g/ml) G Lab File ID: 4C083114.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 3.6614 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	4	U
100-42-5	Styrene	4	U
75-25-2	Bromoform	4	U
98-82-8	Isopropylbenzene	4	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
96-18-4	1,2,3-Trichloropropane	12	U
108-86-1	Bromobenzene	4	U
103-65-1	n-Propylbenzene	4	U
95-49-8	2-Chlorotoluene	4	U
106-43-4	4-Chlorotoluene	4	U
108-67-8	1,3,5-Trimethylbenzene	4	U
98-06-6	tert-Butylbenzene	4	U
95-63-6	1,2,4-Trimethylbenzene	4	U
135-98-8	sec-Butylbenzene	4	U
99-87-6	p-Isopropyltoluene	4	U
541-73-1	1,3-Dichlorobenzene	8	U
106-46-7	1,4-Dichlorobenzene	8	U
104-51-8	n-Butylbenzene	4	U
95-50-1	1,2-Dichlorobenzene	8	U
96-12-8	1,2-Dibromo-3-chloropropane	16	U
120-82-1	1,2,4-Trichlorobenzene	4	U
87-68-3	Hexachlorobutadiene	4	U
91-20-3	Naphthalene	16	U
87-61-6	1,2,3-Trichlorobenzene	8	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2000RC05S02

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05S02

Sample wt/vol: 6.7 (g/ml) G Lab File ID: 4C083114.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 3.6614 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.51	10	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05D02

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05D02

Sample wt/vol: 6.5 (g/ml) G Lab File ID: 4C083117.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 3.66 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	
74-83-9	Bromomethane	8	U
75-00-3	Chloroethane	8	U
107-64-1	Acrolein	400	UJ
75-35-4	1,1-Dichloroethene	4	U
67-64-1	Acetone	180	B
75-15-0	Carbon disulfide	7	
75-09-2	Methylene chloride	80	U
107-13-1	Acrylonitrile	8	UJ
75-34-3	trans-1,2-Dichloroethene	4	U
75-34-3	1,1-Dichloroethane	4	U
78-93-3	2-Butanone	37	J
156-59-2	cis-1,2-Dichloroethene	4	U
594-20-7	2,2-Dichloropropane	4	U
74-97-5	Bromochloromethane	4	U
67-66-3	Chloroform	4	U
71-55-6	1,1,1-Trichloroethane	4	U
563-58-6	1,1-Dichloropropene	4	U
56-23-5	Carbon tetrachloride	4	U
107-06-2	1,2-Dichloroethane	4	U
71-43-2	Benzene	4	U
79-01-6	Trichloroethene	4	U
78-87-5	1,2-Dichloropropane	8	U
75-27-4	Bromodichloromethane	4	U
10061-01-5	cis-1,3-Dichloropropene	4	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	4	U
000110-75-8	2-Chloroether vinyl ether	8	U
10061-01-5	trans-1,3-Dichloropropene	4	U
79-00-5	1,1,2-Trichloroethane	4	U
142-28-9	1,3-Dichloropropane	4	U
127-18-4	Tetrachloroethene	4	U
591-78-6	2-Hexanone	20	U
124-48-1	Dibromochloromethane	4	U
106-93-4	1,2-Dibromoethane	4	U
108-90-7	Chlorobenzene	4	U
630-20-6	1,1,1,2-Tetrachloroethane	4	U
100-41-4	Ethylbenzene	4	U
1083836423	m- &/or p-Xylene	4	U

9/28/00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2000RC05D02

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05D02

Sample wt/vol: 6.5 (g/ml) G Lab File ID: 4C083117.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 3.66 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
95-47-6	o-Xylene	4	U
100-42-5	Styrene	4	U
75-25-2	Bromoform	4	U
98-82-8	Isopropylbenzene	4	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
96-18-4	1,2,3-Trichloropropane	12	U
108-86-1	Bromobenzene	4	U
103-65-1	n-Propylbenzene	4	U
95-49-8	2-Chlorotoluene	4	U
106-43-4	4-Chlorotoluene	4	U
108-67-8	1,3,5-Trimethylbenzene	4	U
98-06-6	tert-Butylbenzene	4	U
95-63-6	1,2,4-Trimethylbenzene	4	U
135-98-8	sec-Butylbenzene	4	U
99-87-6	p-Isopropyltoluene	4	U
541-73-1	1,3-Dichlorobenzene	8	U
106-46-7	1,4-Dichlorobenzene	8	U
104-51-8	n-Butylbenzene	4	UJ
95-50-1	1,2-Dichlorobenzene	8	UJ
96-12-8	1,2-Dibromo-3-chloropropane	16	UJ
120-82-1	1,2,4-Trichlorobenzene	4	UJ
87-68-3	Hexachlorobutadiene	4	UJ
91-20-3	Naphthalene	16	UJ
87-61-6	1,2,3-Trichlorobenzene	8	UJ

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2000RC05D02

Lab Name: Sheffield Steel Contract: CRL

Lab Code: ML-10C Case No.: 20000061 SAS No.: SDG No.: GCMS001

Matrix: (soil/water) SOIL Lab Sample ID: 2000RC05D02

Sample wt/vol: 6.5 (g/ml) G Lab File ID: 4C083117.D

Level: (low/med) LOW Date Received: 08/24/00

% Moisture: not dec. 3.66 Date Analyzed: 08/31/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 3

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000115-11-7	1-Propene, 2-methyl- (CAS) $$ 2-	3.41	66	JN
2. 000109-66-0	Pentane (CAS) $$ n-Pentane $$	4.52	16	JN
3.	unknown	6.49	3	J

SHEFFIELD
STEEL

25 January 2000

Mr. Jeffrey Longsworth
Collier, Shannon, Rill & Scott, PLLC.
Attorneys-at-Law
3050 K Street, N.W.
Suite 400
Washington, DC 20007

Dear Mr. Longsworth:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in responding to this information request. Based on my review of all relevant documents and inquiry of those individuals immediately responsible for providing all relevant information and documents, I believe that the information submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Frank Di Falco
Operations Manager

/blh

State of Illinois

County of Will

Barbara L Hert
Notary Public

OFFICIAL SEAL
BARBARA L HERT
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES:08/02/03

ACCREDITED REGISTRAR ANSI-RAB KPMG Quality Registrar℠
ISO 9002 CERTIFIED

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
847-967-6666
FAX: 847-967-6735

LABORATORY REPORT

208510

Huff & Huff, Inc.
512 W. Burlington, Suite 100
LaGrange, IL 60525

Report Date: 11/17/99
Sample Received: 10/27/99
Date Sampled: 10/27/99

Project Name: Sheffield
Sample Description: Soil Grab - LANDFILL SAMPLE
Sample No.: 086283

Analyte	Result	Date Completed	By	Method
Ash content	98.4%	10/29/99	AF	2540E(2)
Water Compatibility	no reaction	11/05/99	NN	D5058-90(21)
Total Cyanide	<2.00	10/28/99	TM	9010A(6)
Extractable Organic Halogens	30.5	10/27/99	RG	9020A(6)
Odor of sample	NONE	11/02/99	NN	D4979-89(21)
Open Cup Flash Point	>180.°F	10/28/99	WK	D92-90(21)
Paint Filter	PASS	10/28/99	WK	9095(6)
Total Phenolics	<1.00	10/28/99	TM	9065(6)
Physical Appearance	BRWN COLORED DIRT, MIXED W/ SCRAP METAL&ROCKS	10/28/99	WK	D4979-89(21)
Total Solids	99.4%	10/28/99	AF	2540B(2)
Reactive Sulfide	20.4	10/28/99	RG	7.3.4(6)
pH (10% Solution)	8.87units	10/28/99	WK	9045(6)

Performed on Shake Extraction of Solid Waste with Water ASTM D3987-85

Ammonia	<0.40	11/04/99	NN	350.2(20)
COD	17	11/04/99	MN	410.4(20)
CN	<0.05	11/03/99	TM	9010A(6)
FOG	<5	11/05/99	MAG	413.1(20)
Oxidizers	NEG	11/03/99	WK	D4981-89(21)
pH (units)	9.46	11/03/99	WK	9045(6)

Barry W. Wright
LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
847-967-6666
FAX: 847-967-6735

LABORATORY REPORT

Huff & Huff, Inc.
512 W. Burlington, Suite 100
LaGrange, IL 60525

Report Date: 11/17/99
Sample Received: 10/27/99
Date Sampled: 10/27/99

Project Name: Sheffield
Sample Description: Soil Grab - LANDFILL SAMPLE
Sample No.: 086283

Analyte	Result	Date Completed	By	Method
Analysis Performed on TCLP Extract				
Arsenic	<0.200	11/02/99	GF	6010B(6)
Barium	<0.50	11/02/99	GF	6010B(6)
Cadmium	<0.02	11/02/99	GF	6010B(6)
Chromium	<0.10	11/02/99	GF	6010B(6)
Copper	1.96	11/02/99	GF	6010B(6)
Lead	<0.20	11/02/99	GF	6010B(6)
Mercury	<0.0100	11/03/99	AG	7470A(6)
Nickel	0.26	11/02/99	GF	6010B(6)
Selenium	<0.200	11/02/99	GF	6010B(6)
Silver	<0.20	11/02/99	GF	6010B(6)
Zinc	1.19	11/02/99	GF	6010B(6)

All results expressed as ppm unless otherwise indicated
(2) Analysis performed using "Standard Methods for the Examination of Wastewater",19th Edition
(21) Analysis performed using ASTM Method
(6) Methods performed according to SW-846 "Test Methods for Evaluating Solid Waste"
(20) Analysis performed using "Methods for Chemical Analysis of Water and Wastes"

Harry W. Wright

LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
847-967-6666
FAX: 847-967-6735

LABORATORY REPORT

208510-A

Huff & Huff, Inc.
512 W. Burlington, Suite 100
LaGrange, IL 60525

Report Date: 11/17/99
Sample Received: 10/27/99
Date Sampled: 10/27/99
Date Analyzed: 11/01/99

Project Name: Sheffield
Sample Description: Soil Grab - LANDFILL SAMPLE
Sample No.: 086283

Compounds	Concentration Found In Sample	Concentration Found In Blank	Reporting Limit	Regulatory Limit
1. Benzene	<0.25	<0.01	0.01	0.50
2. Carbon Tetrachloride	<0.25	<0.01	0.01	0.50
3. Chlorobenzene	<50.0	<0.01	0.01	100.00
4. Chloroform	<3.0	<0.01	0.01	6.00
5. o-Cresol	<100.0	<0.01	0.01	200.00
6. m-Cresol	<100.0	<0.01	0.01	200.00
7. p-Cresol	<100.0	<0.01	0.01	200.00
Total Cresol	<100.0	<0.01	0.01	200.00
8. 1,4-Dichlorobenzene	<3.75	<0.01	0.01	7.50
9. 1,2-Dichloroethane	<0.25	<0.01	0.01	0.50
10. 1,1-Dichloroethene	<0.35	<0.01	0.01	0.700
11. 2,4-Dinitrotoluene	<0.07	<0.01	0.01	0.13
12. Hexachlorobenzene	<0.07	<0.01	0.01	0.13
13. Hexachloro-1,3 -butadiene	<0.25	<0.01	0.01	0.50
14. Hexachloroethane	<1.50	<0.01	0.01	3.00
15. Methyl Ethyl Ketone	<100.0	<0.01	0.01	200.00
16. Nitrobenzene	<1.00	<0.01	0.01	2.00
17. Pentachlorophenol	<50.00	<0.01	0.01	100.00
18. Pyridine	<2.50	<0.01	0.01	5.00
19. Tetrachloroethylene	<0.35	<0.01	0.01	0.70
20. Trichloroethylene	<0.25	<0.01	0.01	0.50
21. 2,4,5-Trichlorophenol	<200.00	<0.01	0.01	400.00
22. 2,4,6-Trichlorophenol	<1.00	<0.01	0.01	2.00
23. Vinyl Chloride	<0.10	<0.01	0.01	0.20

All results expressed as ppm unless otherwise indicated.
Methods performed according to SW-846, "Test methods for Evaluating Solid Waste".

Analysis performed on Extract from TCLP.

The contents of this report apply only to the sample analyzed. No duplication of this report is allowed except in its entirety.

Leah E. Zeluz
LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.®
8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
847-967-6666
FAX: 847-967-6735
www.emt.com

Chain of Custod Record

TURNAROUND TIME:
☐ RUSH
____ day turnaround
☑ ROUTINE

Due Date: ____-____-____ COC #: 82045

Company: Huff & Huff
Address:

Phone #: (____) ____-______ Fax #: (____) ____-______
P.O.#: 16107 Proj. #: ____-____
Client Contact: L Poulson
Project ID / Location: Shetfield

Sample Type: 1. Waste Water 2. Drinking Water 3. Soil 4. Sludge 5. Oil 6. Groundwater 7. Groundwater (filtered) 8. Other

Container Type: P - Plastic G - Glass V - VOC Vial B - Tedlar Bag O - Other

Preservative: 1. None 2. H_2SO_4 3. HNO_3 4. NaOH 5. HCl 6. MeOH 7. Other

Analyses

Sample I.D.	Sample Type	Container Size	Container Type	Container No.	Sampling pH	Sampling Temp.	Sampling Date	Sampling Time	Preservation Field	Preservation Lab	Code K	EOX	LN Panel									Laboratory Sample Number
Landfill sample	S	1qt	G	4							✓	✓	✓									86283
																						Waste management landfill approval

Relinquished By:	Date / Time	Received By:	Date / Time
L Poulson	Date: 10-27-99 Time: 1:00	Kevin Smith	Date: 10-27-99 Time: 13:00
Kevin Smith	Date: 10-27-99 Time: 4:30	Received By:	Date: -- -- Time: :
Relinquished By:	Date: -- -- Time: :	Received For Lab By: [signature]	Date: 10-27-99 Time: 4:30

EMT USE ONLY
Client Code:
Jar Lot No.

☒ SAMPLE RECEIVED ON ICE
☐ TEMPERATURE

EMT SAMPLE RETURN POLICY ON BACK

SPECIAL INSTRUCTIONS:

Verbal 20000061 for ICP RCRA metals

Blanks slightly above detection limit are Cd and Cr. The instrument QC are within range. Matrix spike of S06 resulting in Cr and Pb in the sample exceeding double the spike; also Cd spike recovery was 153%; thus these audits may be invalid. The high Fe levels produced an interference on Ag.

These results must be considered to be a screening only.

If more accurate results are required, please advise and we will spike at a much higher concentration and run dilutions to obtain Ag results.

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05D01	Station ID:	D01
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	3.8 J	mg/kg
Barium	8.4	mg/kg
Cadmium	0.7 U, B, J	mg/kg
Chromium	430 B, J	mg/kg
Lead	63 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S01	Station ID:	S01
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	3.5 J	mg/kg
Barium	8.2	mg/kg
Cadmium	0.7 U, B, J	mg/kg
Chromium	400 B, J	mg/kg
Lead	67 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S02	Station ID:	S02
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	2.7 J	mg/kg
Barium	12	mg/kg
Cadmium	0.7 U, B, J	mg/kg
Chromium	390 B, J	mg/kg
Lead	77 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S03	Station ID:	S03
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	2 J	mg/kg
Barium	7.5	mg/kg
Cadmium	0.7 U, B, J	mg/kg
Chromium	290 B, J	mg/kg
Lead	38 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S04	Station ID:	S04
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	0.9 J	mg/kg
Barium	180	mg/kg
Cadmium	3.5 B, J	mg/kg

Chromium	73 B, J	mg/kg
Lead	270 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S05	Station ID:	S05
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	1.3 J	mg/kg
Barium	78	mg/kg
Cadmium	2.3 B, J	mg/kg
Chromium	81 B, J	mg/kg
Lead	260 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S06	Station ID:	S06
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	2.8 J	mg/kg
Barium	71	mg/kg
Cadmium	19 B, J	mg/kg
Chromium	210 B, J	mg/kg
Lead	210 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S07	Station ID:	S07
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	1.2 J	mg/kg
Barium	160	mg/kg
Cadmium	4.2 B, J	mg/kg
Chromium	23 B, J	mg/kg
Lead	180 J	mg/kg

US EPA CRL - Region V
ICP Final Report Results

Sample Number:	RC05S08	Station ID:	S08
Sample Batch Number:	20000061	Study:	Sheffield
Analysis Date:	09 14 00		Steel

Element	Amount	Units
Silver	1.7 J	mg/kg
Barium	290	mg/kg
Cadmium	4.5 B, J	mg/kg
Chromium	22 B, J	mg/kg
Lead	230 J	mg/kg